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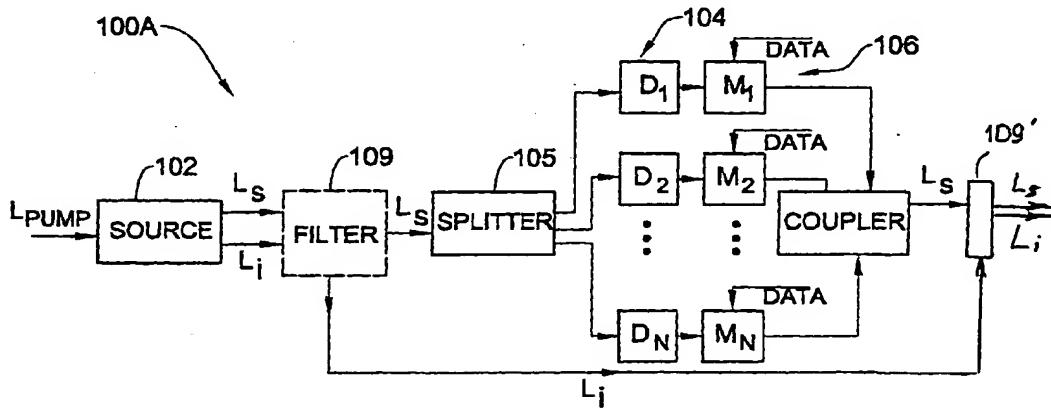
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND SYSTEM FOR USE IN OPTICAL CODE DIVISION MULTIPLE ACCESS



(57) Abstract: A method and device (100A) are provided for automatically generating a key and a conjugate key to be used in an optical code division multiple access system. The method comprises applying a down conversion process to pump input light to thereby produce down converted broadband signal and idler fields (L<sub>S</sub>, L<sub>i</sub>) that are complex conjugates of each other. The signal and idler fields thus serve as the key and its conjugate. Also provided according to the invention is a method for use in coding/decoding a signal in an optical code division multiple access system.

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**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/IL04/00328

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : H04J 14/00; G02F 1/35  
US CL : 398/78; 359/326

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 398/77, 78; 359/326-332

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| A,P        | US 2003/0147655 A1 (SHATTIL) 07 August 2003 (07.08.2003), see entire document.  | 1-60                  |
| A          | NATARAJAN, B. et al, "High-Performance MC-CDMA via Carrier Interferometry Codes", IEEE TRANS. VEH. TECH., Nov. 2001, vol. 50, no. 6, pp. 1344-1353. | 1-60                  |

Further documents are listed in the continuation of Box C.  See patent family annex.

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Date of the actual completion of the international search Date of mailing of the international search report

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**INTERNATIONAL SEARCH REPORT**

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Continuation of B. FIELDS SEARCHED Item 3:

USPTO "WEST" Database

Search terms: conjugate, key, down adj conver\$, downconver\$, signal, idler, code adj division\$, cdma, complex adj conjugat\$